IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transmitter comprising:

a carrier wave generation means for generating a carrier wave possessing a predetermined frequency;

a baseband pulse generation means for generating baseband pulses at time intervals equal to a fraction 1/n of said predetermined frequency (n is an integer); and

a modulation means for modulating said baseband pulses with said carrier wave and generating an n cycle pulse.

Claim 2 (Currently Amended): A transmitter comprising:

a baseband pulse generation means for generating baseband pulses with a pulse width equal to a rectangular wave pulse length that is an integer multiple of one cycle of a ~~the~~ predetermined frequency carrier wave; and

a modulation means for modulating said baseband pulses with said carrier wave and generating an n cycle pulse with a number of cycles n equal to the integer multiple.

Claim 3 (Original): A transmitter according to claim 1 or 2, wherein said carrier wave generation means generates a carrier wave possessing a frequency set in the center of the transmission band.

Claim 4 (Original): A transmitter according to claim 1 or 2, wherein said carrier wave generation means generates a carrier wave possessing a frequency set in the center of a band not interfering with communication systems already in use.

Claim 5 (Original): A transmitter according to claim 1 or 2, wherein said modulation means converts the frequency of said baseband pulses by using said carrier wave.

Claim 6 (Currently Amended): A transmission method comprising the steps of:

generating a carrier wave possessing a predetermined frequency; ~~and~~

generating baseband pulses at time intervals equal to a fraction 1/n of said frequency (n is an integer); ~~and~~

modulating said baseband pulses by using said carrier wave; and

generating and transmitting an n cycle pulse.

Claim 7 (Currently Amended): A transmission method comprising the steps of:

generating rectangular wave pulses, as baseband pulses, with a length that is an integer multiple of a ~~said~~ predetermined carrier wave frequency; ~~and~~

modulating said baseband pulses by using said carrier wave; and

generating and transmitting an n cycle pulse with a number of cycles n equal to the integer multiple.

Claim 8 (Currently Amended): A receiver for receiving a signal transmitted on a carrier wave having a frequency set in a ~~the~~ center of a ~~the~~ transmission band and obtained by using said carrier wave to modulate ~~the~~ baseband pulses generated at time intervals equal to a fraction 1/n of said carrier wave (n is an integer), the receiver comprising: ~~wherein~~

a detector configured to detect a baseband pulse train of n cycles ~~is detected~~ by quadrature detection using a carrier wave with a ~~the~~ same frequency as during transmission.

Claim 9 (Currently Amended): A receiver according to claim 8, wherein said transmitted signal contains a predetermined training signal, the time intervals between said baseband pulses are divided into equal durations at least shorter than a ~~the~~ pulse width, said detector is configured to repeatedly perform an analog/digital conversion sequence ~~is repeatedly performed~~ multiple times on said baseband pulses that are quadrature-detected at all divided positions in the pulse time interval, and the detector is configured to estimate pulse position ~~is estimated~~ based on ~~the~~ amplitude values.

Claim 10 (Currently Amended): A receiver according to claim 9, wherein said detector is configured to integrate amplitude ~~energy~~ values are integrated and to determine as a pulse position a ~~the~~ point where an ~~the~~ integrated value becomes large within a ~~the~~ time interval between pulses ~~is determined as the pulse position~~.

Claim 11 (Currently Amended): A receiver according to claim 10, wherein a ~~said~~ preamble section of said transmitted signal contains a periodic pattern of the time required to perform analog/digital conversion at all the positions, and the detector is configured to sum I and Q values detected by quadrature detection ~~are summed~~ in a manner similar to complex numbers, and to determine as a pulse position a ~~the~~ point where an ~~the~~ energy value of a ~~the~~ summed value becomes large is determined as a ~~the~~ pulse position.

Claim 12 (Currently Amended): A receiver according to claim 11, wherein said detector is configured to detect a periodic pattern phase ~~is detected~~ and to estimate transmission path status ~~is estimated~~ by eliminating ~~the~~ effects of a ~~said~~ pattern from the data summed in a manner similar to complex numbers.

Claim 13 (Currently Amended): A receiver according to claim 8, wherein said detector is configured to correct or track pulse position ~~is corrected or tracked~~ by detecting a ~~the~~ phase shift of said carrier wave, and to determine a ~~as well as the~~ point where a ~~the~~ received energy is high ~~is determined~~ as a ~~the~~ pulse position.

Claim 14 (Currently Amended): A receiver according to claim 13, wherein said detector is configured to track pulse position ~~is tracked~~ by digital processing when the analog/digital conversion speed is sufficiently high.

Claim 15 (Currently Amended): A receiver according to claim 14, wherein the detector is configured to convert phase of the information bit phase ~~is converted~~ by analog operations such as addition/subtraction and inversion of I and Q, and to evaluate a ~~the~~ result ~~is then evaluated~~ to select the phase having an optimal phase shift.

Claim 16 (Currently Amended): A receiving method for receiving a ~~the~~ transmitted signal comprised of n [[N]] cycle pulses obtained by carrier-modulating a ~~said~~ baseband pulses generated at time intervals equal to a fraction 1/n (n is an integer) of a ~~said~~ carrier wave with a frequency set in the center of the transmission band, said method comprising:

detecting ~~wherein~~ a baseband pulse train of n cycle pulses ~~is detected~~ by quadrature detection using a carrier wave with a ~~the~~ same frequency as during transmission; and

extracting data from said pulse train detected in said detecting.

Claim 17 (Currently Amended): A transmitter according to claim 1, further comprising: ~~containing~~

a spread code generator module for generating spread codes for direct spectrum spread.

Claim 18 (Currently Amended): A receiver according to claim 8, further comprising: ~~containing~~

a spread code generator module for generating spread codes for direct spectrum spread.

Claim 19 (Currently Amended): A pulse detection method for detecting the pulse position of a signal transmitted on a carrier wave with a frequency set in the center of the transmission band and obtained by carrier-modulating ~~said~~ baseband pulses generated at time intervals equal to a fraction 1/n of said carrier wave (n is an integer), and said transmitted signal contains a predetermined training signal, said method comprising:

dividing ~~wherein the~~ time intervals between pulses ~~are divided~~ into equal durations at least shorter than the pulse width,

repeatedly performing an analog/digital conversion sequence ~~is repeatedly performed~~ multiple times on said baseband pulses that are quadrature-detected at all divided positions, and

estimating said pulse position ~~is estimated~~ based on ~~the~~ amplitude values.

Claim 20 (Currently Amended): A pulse detection method according to claim 19, ~~wherein~~ further comprising:

integrating said amplitude energy values; ~~are integrated~~ and

determining a ~~the~~ point where the integrated value is a maximum within the time interval between pulses ~~is determined~~ as a ~~the~~ pulse position.

Claim 21 (Currently Amended): A pulse detection method according to claim 20, further comprising:

summing I and Q values detected by quadrature detection in a manner similar to complex numbers, and

determining a point where an energy value of a summed value becomes large as a pulse position,

wherein said preamble section of said transmitted signal contains a periodic pattern of the time required to perform analog/digital conversion at all the positions~~, and the I and Q values detected by quadrature detection are summed in a manner similar to complex numbers, and the point where the energy value of the summed value becomes large is determined as the pulse position~~.

Claim 22 (Currently Amended): A tracking method for tracking a signal transmitted on a carrier wave with a frequency set in the center of the transmission band and obtained by carrier-modulating a ~~said~~ baseband pulses generated at time intervals equal to a fraction 1/n of said carrier wave (n is an integer), the method comprising:

correcting or tracking a ~~wherein said~~ pulse position ~~is corrected or tracked~~ by detecting a ~~the~~ phase shift of said carrier wave;[[,]] and

determining a ~~as well as the~~ point where ~~the~~ received energy is high ~~is determined~~ as a ~~the~~ pulse position.

Claim 23 (Currently Amended): A tracking method according to claim 22, wherein said tracking includes tracking pulse position ~~is tracked~~ by digital processing when the A/D conversion speed is sufficiently high.

Claim 24 (New): A transmitter comprising:

a carrier wave generator configured to generate a carrier wave possessing a predetermined frequency;

a baseband pulse generator configured to generate baseband pulses at time intervals equal to a fraction 1/n of said predetermined frequency (n is an integer); and

a modulator configured to modulate said baseband pulses with said carrier wave and to create an n cycle pulse.

Claim 25 (New): A transmitter comprising:

a baseband pulse generator configured to generate baseband pulses with a pulse width equal to a rectangular wave pulse length that is an integer multiple of one cycle of a predetermined frequency carrier wave; and

a modulator configured to modulate said baseband pulses with said carrier wave and to create an n cycle pulse with a number of cycles n equal to the integer multiple.